HOW WHEAT FARMERS would adjust to different programs

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CONTENTS

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HOW WHEAT FARMERS WOULD ADJUST TO DIFFERENT PROGRAMS

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SUMMARY AND CONCLUSIONS

The study reported here was undertaken to see how representative wheat farmers in specialized producing areas would adjust most profitably to different wheat programs. What changes would occur in the acreage and production of wheat and other crops? How would the income opportunities of programs compare?

Six different programs were studied on representative farms, otherwise identified as study farms, in eight specialized wheat-producing areas in the Great Plains and the Pacific Northwest. Study farms are located in Kansas, Oklahoma, Colorado, Montana, Washington, and Oregon. These farms represent major producing situations in each area. As the figures are not area averages, they do not reflect average incomes among areas, although comparisons are valid between programs on the same farm.

Program features used include modifications of the present acreage-allotment and price-support program; marketing allotments and stratified wheat prices; and no controls or price supports. "Prototype programs" constructed around each feature specify the price of wheat and other crops and either the maximum acreage of wheat, or the maximum quantity that could be marketed. Many other combinations might have been developed, but these combinations include the major features of programs under discussion at the time the study was made.

To determine the adjustments that would maximize incomes on the study farms with the programs, budgets were prepared for each farm. A charge for all labor at hired wages per hour is included in expenses, but no charge is made for management and invested capital. Crop yields are the average that operators of the study farms can expect with average weather and present practices. Crops other than wheat could be grown under each program without restriction for sale at the following assumed prices (U. S. average):

Grain sorghum	$1.10 (bushel)
Barley	.90 (bushel)
Dry peas (Washington farm)	3.60 (cwt.)

Effects of each specified program on wheat acreage, total grain production, and net income to management and invested capital of study farms are compared with effects of program A (1960 acreage allotments and price supports). These comparisons are summarized in table 1.

Smaller Acreage Allotments (Program B). - With wheat prices raised to 85 percent of parity and acreage allotments decreased 25 percent from the 1960 level, net income to management and invested capital would be slightly higher on most study farms. It would equal the income under program A on the north-central Montana farm and would be 2 percent below the income under program A on the northeastern Montana and eastern Washington farms. Wheat production on each farm would decrease 25 percent, but total grain production would change very little except that it would increase 11 percent on the northwestern Kansas farm and 16 percent on the Colorado farm.

Larger Acreage Allotments (Program C). - With wheat prices lowered to 65 percent of parity and acreage allotments increased 20 percent, net incomes would be reduced 8 to 25 percent. Wheat production would increase about 20 percent, but total grain production would change very little. On the Colorado farm, the reduction would be 8 percent.

Food and Export Allotment and Land Reserve (Program D). - This program would include a marketing allotment on food wheat, export wheat

priced at 65 percent of parity and other wheat at a feed price, 80-cent a bushel payment on food-wheat quota, and 20 percent of the wheat base acreage in a land reserve, at the 1960 rate of payment. With this program, net incomes would increase on all study farms. The increase would be 15 percent or less on the Kansas farms, 20 to 25 percent on the Colorado and northeastern Montana farms, and 34 to 39 percent on the Oklahoma, north-central Montana, Washington, and Oregon farms. Wheat production would decrease on the northwestern Kansas and Colorado farms and increase on the other farms. The Kansas farms would produce only marketing-allotment wheat. Operators of other study farms would find it profitable to produce all wheat and no feed grains except as a catch crop on wheat seedings that fail. Operators of all study farms would place land in a reserve to earn the special food-wheat payment. Total grain production would decrease.

Food Allotment (Program E). - With marketing allotments on food wheat priced at 90 percent of parity, other wheat at a U. S. price of $1.25, and no land-reserve requirement, net incomes would decrease 2 to 11 percent on the Colorado and Kansas farms and would increase 5 to 19 percent on the others. Operators of the Kansas farms would maximize income by producing only marketing-allotment wheat, but operators of the other farms would produce all wheat and no feed grains. Total grain production would increase 8 to 10 percent on the northwestern Kansas and Washington farms. It would decrease 5 to 11 percent on the Oklahoma and Colorado farms but would change little on other farms.

No Controls (Program F). - With no production controls and no price supports, net incomes would decrease on all study farms. Incomes would decrease least (19 percent) on the Washington farm, and most (66 percent) on the Oklahoma farm. Wheat production would increase on all study farms except the northwestern Kansas farm (-1 percent). Total grain production would change about the same as with program E.

The impact of each program would vary on the different farms. A program restricting wheat production (such as the restricted acreage-allotment program) would favor the farms with a profitable alternative crop, such as grain sorghum in the Southern Plains. Conversely, programs permitting production of additional wheat for sale at a nonsupported or feed price would favor farms with a less profitable alternative crop, such as barley in the Northern Plains and the Pacific Northwest.

Net returns from a land reserve at 1960 rates of payment would be higher than from wheat at a *feed price* on the Kansas and north-central Montana farms; higher than wheat at the *nonsupported price* on the Colorado, northeastern Montana and Oregon farms; higher than wheat at *65 percent of parity* on the Oklahoma farm. Net returns from the reserve would be higher than grain sorghum on the northwestern Kansas, Oklahoma and Colorado farms; and higher than barley on the Montana and Oregon farm.

Conclusions drawn from the study would seem to warrant generalizations to cash grain farms other than study farms in specialized wheat-producing areas.

When acreage allotments are in effect, operators of specialized wheat farms grow the allotted acreages even though wheat prices are supported at prices as low as 65 percent of parity.

Even at a feed price, wheat is a more profitable crop than barley on specialized wheat farms in Montana, Washington, and Oregon. With no production restrictions, specialized wheat growers in these areas would produce maximum acreages of wheat and little or no barley at the assumed prices. In Kansas and Colorado, however, grain sorghum is more profitable than wheat at a feed equivalent price. With no wheat acreage base to protect and with unallotted wheat selling at a feed price, farmers in these areas would grow all the grain sorghum they could safely grow and still control erosion.

The best income-producing crops other than wheat are feed grains on specialized wheat farms in both the Great Plains and the Pacific Northwest. Forage might be relatively more profitable on livestock farms, but these farms were not included in the study.

Wheat production would not decline but would continue for some time at least on specialized farms in the Northern Plains and the Pacific Northwest, even if the price of wheat were lower than any level now seriously considered. Income would cover the direct expenses of production although return to invested capital would be reduced.

Table 1. - Effects of specified programs on wheat acreage, grain production, and income, study farms

Item	1960 acreage allotment program (program A)	Percentage change with —				
		Smaller acreage allotment (program B)	Larger acreage allotment (program C)	Food and export allotment (program D)	Food allotment (program E)	No controls (program F)
	Acres	Percent	Percent	Percent	Percent	Percent
Acreage of wheat:						
West-central Kansas	280	-25	20	4	7	22
Northwestern Kansas	270	-25	20	-23	-16	-1
Northwestern Oklahoma 1/	473	-25	20	25	55	55
Eastern Colorado	550	-25	20	-3	16	16
Northeastern Montana	405	-25	20	14	43	43
North-central Montana	405	-25	20	14	43	43
Eastern Washington	166	-25	20	73	98	98
Columbia Basin, Oreg.	520	-25	20	23	54	54
	Tons					
Production of all grain:						
West-central Kansas	215	0	0	-28	3	0
Northwestern Kansas	246	11	1	-21	8	9
Northwestern Oklahoma 1/	314	1	-3	-21	-5	-5
Eastern Colorado	368	16	-8	-25	-11	-11
Northeastern Montana	260	1	-1	-22	-2	-2
North-central Montana	370	1	-1	-22	-2	-2
Eastern Washington	434	-1	1	-4	10	10
Columbia Basin, Oreg.	734	0	1	-19	-2	-2
	Dollars					
Net income: 2/						
West-central Kansas	4,675	7	-22	15	-4	-52
Northwestern Kansas	5,755	5	-22	4	-11	-49
Northwestern Oklahoma 1/	5,748	6	-25	39	5	-66
Eastern Colorado	10,513	9	-15	20	-2	-47
Northeastern Montana	6,022	-2	-13	38	14	-42
North-central Montana	9,756	0	-14	25	11	-35
Eastern Washington	12,175	-2	-8	34	19	-19
Columbia Basin, Oreg.	17,812	2	-13	37	9	-44

1/ Excludes panhandle counties.
2/ Return to management and invested capital. Computation explained in section on Budget Analysis.

Although income from feed grains is smaller than that from wheat on most farms, the income from feed grains is important to the specialized wheat farmer when wheat acreage is restricted. If the farm is to remain efficient, all of its resources must be used productively.

Total grain production on specialized wheat farms changes very little whether wheat or a feed grain or a combination of the two is produced.

INTRODUCTION

The United States wheat industry has operated under essentially the same production-control and price-support program for 6 years. During that time, surplus stocks of wheat have accumulated, and public expenditures for storage have mounted. The situation that has developed needs no documentation here. Almost everyone agrees that changes in the wheat program are needed, but general agreement as to what the new program should be has not been reached.

Views differ as to the role of wheat prices. Should prices chiefly regulate supply and demand or should they assure farm income? Some persons believe that it would be best to discontinue production-control programs and price supports, to let supply and demand be equated at a free market price. Others think this might work if enough wheat land were retired from farming by some other means.

Some persons believe production controls and supported prices should apply only to the wheat needed for food in the United States and possibly for commercial exports. Let farmers produce additional wheat for other uses if they wish, but in competition with other grains used largely for feed. Still others would prefer a combination of programs that would include some production-control features, some price supports, and some land retirement. Perhaps most of them would agree that the wheat industry needs help in making adjustments.

Views on proposed wheat programs differ because some people focus on the aggregative problem of surpluses, while others stress the income problem of wheat farmers. Information is lacking as to how various program features would affect the production and returns on representative farms. We need to consider such effects in the choice of alternative programs. Knowledge of the impact of alternative programs on individual farms is necessary to determine whether a program would in fact "solve" the problem.

This report describes the impact of different programs on the production and income of representative wheat farms in specialized wheat-producing areas. The features examined are of four kinds: (1) modifications of the present acreage-allotment program; (2) marketing allotments in bushels and stratified wheat prices; (3) no production controls or price supports; and (4) land retirement alone or in conjunction with each of the other programs. Around each feature is constructed an example, or prototype, program which specifies the price of wheat and other crops and in some instances, the maximum acreage or quantity of wheat to be produced.

Since the study was made, legislation has been enacted providing an emergency program for feed grains. This program was not included among those studied.

The analysis deals with the effects of specified programs on individual wheat farms, without regard to the aggregative effects. In fact, some, perhaps all, of the programs tested may not be "equilibrium programs" in that they might not balance supply and demand of wheat or feed grains at the assumed prices. To ascertain the aggregative effect of the different programs and to test them for equilibrium would require study of many additional farm situations in many areas. Such a study in major wheat-producing areas is now underway as western regional research project W-54. This report is based in part on some of the preliminary analyses and on data from a few selected situations under study in projects contributing to the regional effort.

FARMS STUDIED

The farms selected for study are representative of cash grain farming in eight specialized wheat-producing areas. Six are in the Great Plains and two are in the Pacific Northwest. Five are in areas in which wheat is usually grown biannually, alternating with fallow. In the three

remaining areas, wheat is customarily grown annually, after wheat or another crop, but fallow may be used when rainfall is low. The farms studied are in areas that produce three classes of wheat. Soft white winter wheat is produced in Washington and Oregon, hard red spring wheat in the Northern Plains, and hard red winter wheat in the Northern, Central, and Southern Plains.

Although study farms represent a major production situation in each area, we do not imply that response would be the same on all farms in each area. Farms of another size or with different resources might find it profitable to respond differently. A study farm is not necessarily an average of all farms in the area; usually it represents a central model size group. Obviously, the study farms do not reflect relative incomes per farm among areas, although comparisons are valid between programs on the same farm. General characteristics of the farms studied are shown in table 2.

BUDGET ANALYSIS

The analysis presented here is based on farm budgets of the study farms, in which production, income, expenses, and net returns are computed. Budgeting determines the most profitable use of land and other resources of the farm under each program, considering program and other restrictions incidental to the practical operation of the farm. Several budgets or partial budgets may be required to determine the most profitable production plan under each program. Budgets also permit comparison of the economic advantage of different programs on the same farm—within the limits of the specified assumptions. Comparability between study farms of adjustments to the same program is achieved to a degree by using uniform program assumptions and a common set of prices, adjusted for area and regional differences. Comparability is not achieved completely, however, in that study farms may not represent their respective areas equally well.

The budgets are simplified to the extent that they focus on crops, the chief concern of the analysis. Livestock enterprises found on grain

Table 2. - Description of study farms

Study farm	Acreage in—			Alternative crop	Method of growing—	
	Farm	Crops	Wheat base		Wheat	Alternative crop
	Acres	Acres	Acres			
West-central Kansas	640	540	440	Grain sorghum	Continuous cropping	Chiefly continuous cropping.
Northwestern Kansas. . . .	960	770	417	do.	Chiefly fallow	Do.
Northwestern Oklahoma. . .	960	735	718	do.	Chiefly continuous cropping	Do.
Eastern Colorado.	1,920	1,800	803	do.	Chiefly fallow	Do.
Northeastern Montana. . . .	1,200	1,156	578	Barley	All on fallow	On fallow.
North-central Montana . . .	1,200	1,156	578	do.	All on fallow	Do.
Eastern Washington	540	520	255	Barley, peas	Chiefly continuous cropping	Both ways.
Columbia Basin, Oreg.	1,650	1,600	800	Barley	All on fallow	On fallow.

farms are not included. Budgets are simplified also in that minor feed grain crops are converted, when feasible, to the major feed grain crop on the farm - grain sorghum in the Central and Southern Plains and barley in the Northern Plains and the Pacific Northwest. These simplifications do not affect the essential validity of the results.

In the main, budgets depict the most profitable adjustments on the farm to each program situation, with consideration given to good farming practices and farmers' demonstrated preferences. For example, grain sorghum on fallow increases the hazard of wind erosion, hence it is to be avoided when possible. Again, some farmers may prefer to grow all wheat even though another crop might pay slightly better than feed wheat. Farmers might grow wheat exclusively rather than provide storage for two kinds of grain.

Crop yields used in the analysis are average yields—those that farmers operating similar farms can expect in the future. Yields vary under different programs as influenced by the crop sequence. For example, the yield of wheat following wheat differs from the yield of wheat following fallow. The yield of sorghum differs when the sorghum follows sorghum, wheat, or fallow, or is seeded on abandoned wheatland. Wheat yields vary also because farmers tend to select the better land when acreage is restricted and they have a choice of land. The production shown in the tables excludes seed requirements.

Expenses in the budget analysis were computed at the 1959 cost rates per unit. Expenses include the usual inputs of motor fuel and lubricants, repairs, treatment of seed, fertilizer and chemicals at common rates of application, property taxes, insurance, motor licenses, custom hire (as applicable), depreciation, hired labor, and a charge for operator labor at the hired wage rate per hour. With all labor included, the farm incomes under the programs have greater comparability. Not included is a charge for the use of capital, or for management.

Commodity prices used in the analysis are assumed to be at the farm level. All prices were adjusted for prevailing regional and area differences; they are for the average grade of product marketed in the area. In programs under which wheat prices are supported, the U.S. average price was computed relative to parity, then adjusted to the area. Nonsupported wheat prices and prices of other commodities summarized in table 3 are those assumed for purposes of the study. None of the prices are necessarily equilibrium prices in the aggregate sense, that is, they might not equilibrate aggregate supply and demand if the adjustments induced by the various programs were widely adopted. As estimates of equilibrium prices were not available, the prices used are approximations judged to be the best available for this analysis. Even though these prices are not based on supply-demand analysis, they serve the purpose of comparability among programs.

Net farm income in the budget analysis is gross income minus expenses as defined. It is the return to management and to capital investment in the farm including equipment.

The budget analysis is based on full ownership of the farm. No appraisal was made of the income effects of the programs to tenant operators. Moreover, the analysis does not consider problems that might occur in adjusting from the present program to a new one. Problems of this kind might delay some farmers in making the adjustments found to be "most profitable." The question of implementing a program was not an expressed purpose of the study reported.

PROGRAMS STUDIED

The programs used in the study include the major types of features proposed or discussed. An example, or prototype, program was constructed around each feature to specify the conditions under which wheat is produced and its price. These specifications and prices were selected arbitrarily for purposes of the analysis. For easy reference, programs are identified by letters of the alphabet; they are described in the paragraphs that follow.

1960 Acreage Allotments (Program A). - This is essentially the present (1960) acreage-allotment program, but without the Conservation Reserve. It consists of the 1960 wheat acreage allotments (harvested basis) with the price of wheat supported at a U. S. average price of $1.80 a bushel, which is assumed to be 75 percent of parity. Penalties, which are not specified, effectively limit production to the allotted acreage. Other crops can be produced and

Table 3. - Crop prices per bushel established for budget analysis, study farms

Item	West-central Kansas	North-western Kansas	North-western Oklahoma	Eastern Colorado	North-eastern Montana	North-central Montana	Eastern Wash-ington	Columbia Basin, Oreg.	Assumed U. S.
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Wheat at—									
90 percent parity . . .	2.15	2.12	2.14	2.12	2.08	1.96	2.10	2.15	2.16
85 percent parity . . .	2.02	2.00	2.02	2.00	1.95	1.84	1.98	2.03	2.04
75 percent parity . . .	1.82	1.79	1.78	1.77	1.72	1.61	1.75	1.79	1.80
65 percent parity . . .	1.55	1.53	1.54	1.53	1.47	1.36	1.52	1.55	1.56
Nonsupported price. .	1.26	1.24	1.24	1.22	1.19	1.12	1.20	1.25	1.25
Feed price 1/	1.20	1.18	1.12	1.01	1.05	1.00	1.20	1.25	---
Grain sorghum	1.02	1.00	.95	.86	---	---	---	---	2/ 1.01
Barley	---	---	---	---	.72	.69	.82	.87	.90
Peas	---	---	---	---	---	---	3/ 3.60	---	---

1/ Based on price of predominant feed grain produced in the area, adjusted for equivalent feeding value.
2/ Equivalent to U. S. price of $1.80 per hundredweight.
3/ Price per hundredweight.

marketed freely at the assumed prices (table 3). The situation under this program is used as a basis for comparing situations under other programs.

Small Acreage Allotments (Program B). - Under this program, wheat acreage allotments would be 25 percent *smaller* than those under program A, but the price of wheat would be supported at a U. S. average price of $2.04 a bushel, about 85 percent of parity. Other conditions would be the same as under program A. Program B is intended to determine the production and effects on the study farms with smaller acreage allotments combined with higher wheat prices.

Larger Acreage Allotments (Program C). - Under program C, wheat acreage allotments would be 20 percent *larger* than those under program A, but the price of wheat would be supported at a U. S. average of $1.56 a bushel, about 65 percent of parity. Other conditions would be the same as under program A. The purpose of program C is to determine the production and income effect on the study farms of larger wheat acreage allotments combined with lower support prices.

Food and Export Allotment (Program D). - With this program, each farm would have a wheat marketing allotment in bushels equal to two-thirds of the normal yield on the 1960 wheat base acreage. The marketing allotment is presumed to be the farm share of the wheat required for domestic food uses and exports. This quantity of wheat would be supported at a U. S. average price of $1.56 a bushel, about 65 percent of parity. Other wheat could be grown and sold at a feed-equivalent price, based on the price of the predominant feed grain grown in the study farm locality. The farm has a food wheat quota in bushels equal to five-twelfths of the normal yield on its 1960 wheat base acreage. The farmer could earn a payment of 80 cents a bushel on the food quota by contracting 20 percent of his wheat base acreage in a land reserve. In areas where wheat is commonly grown on fallow, an equal acreage of fallow land must be put into the reserve. This acreage depends upon the proportion of wheat grown in fallow in 1959. Land in the reserve earns annual rental payments equal to the 1960 rates of the Conservation Reserve Program. The farmer would not be required to put the land in the reserve if he wanted to forego the payment of 80 cents a bushel on his food wheat quota. The total land-reserve payment per farm would not be limited. There would be no other form of land reserve. Other crops could be produced on any remaining land and sold at the assumed prices (table 3).

With program D, the farmer could carry over wheat to apply against his marketing allotment or food quota of a later year. He or the trade would store the extra production from a bumper crop. With the present acreage-allotment program, most of the carryover is stored by the Government.

Food Allotment (Program E). - This program is a similar though simplified version of program D. Each farm would have a marketing allotment in bushels equal to normal yield on five-twelfths of the 1960 wheat base acreage. This quantity of wheat would be equal to the food quota in program D. The price of allotment wheat would be supported at a U. S. average price of $2.16 a bushel, about 90 percent of parity. No special payment could be earned by participation in a land reserve. In fact, no land-reserve program is assumed. Other wheat might be grown and sold at a nonsupported price of $1.25 a bushel, U. S. average. Presumably, nonallotment wheat would be exported, but some of it would be used for feed. Other crops could be produced and sold freely at the assumed prices (table 3).

With program E, the farmer could carry over wheat to apply against his marketing allotment, and he or the trade would store any extra production.

No Controls (Program F). - Under program F, wheat and other crops could be produced in any quantity as no acreage or marketing restrictions would be in effect. Wheat would sell at a nonsupported price, $1.25 a bushel, U.S. average. Other crops would sell at the assumed prices (table 3). There would be no land-reserve program.

The chief production-control and price features of the programs studied may be summarized as follows:

Program	Control	Wheat support level	Price of wheat
			Dollars
A----------	1960 acreage allotment	75 percent of parity	1.80
B----------	75 percent of 1960 acreage allotment	85 percent of parity	2.04
C----------	120 percent of 1960 acreage allotment	65 percent of parity	1.56
D----------	Marketing allotment: 2/3 normal yield on 1960 wheat base acreage	65 percent of parity	1.56
	Food wheat quota: 5/12 normal yield on 1960 wheat base acreage	~~85~~ 80 cents a bushel	----
E----------	Marketing allotment: 5/12 normal yield times 1960 wheat base acreage	90 percent of parity	2.16
F----------	None	None	1.25

With other specifications, the programs would affect the study farms differently. For example, if in program C, the price of wheat were at 70 instead of 65 percent of parity, net farm income would be about equal to that with program A.

ECONOMIC SETTING FOR ADJUSTMENTS

The adjustments that wheat farmers make to programs are influenced by several key things. One is the comparative returns from wheat and alternative crops. Another is the restriction imposed by crop sequences—crop A may readily follow crop B but not crop C. This becomes important when the choice includes fall-seeded and spring-seeded crops and when some crops are grown on fallow and others in annual cropping.

Traditionally, wheat has been the crop of highest return on the study farms. Generally, it is the crop best adapted ecologically to climate and soils. It often yields more pounds of grain per acre than other crops, except the recent hybrid sorghums, which in some instances yield equally well.

For various reasons, wheat may be grown on study farms when comparative average returns seem to favor other crops. Farmers seed wheat whenever crop prospects are especially favorable because high-yielding wheat may pay better, even at a moderate price, than another crop. Moreover, yield prospects for the other crop may not be as good at the time. Some farmers may prefer to grow only one crop (wheat) because two or more crops would complicate storage. Other farmers have other reasons.

After wheat, the next best paying crop on the study farms usually is a feed grain (table 4). Much of the land is diverted to production of feed grains when the acreage of wheat is restricted by programs. Budget analyses show that returns from forage are not as high as returns from feed grains on the study farms. Forage crops may pay better on farms that specialize in livestock.

On the west-central Kansas study farm, net returns from grain sorghum are higher than wheat at a nonsupported price but lower than wheat priced at 65 percent of parity (table 4). Net returns from grain sorghum are nearly equal to returns from fallow-wheat priced at 65 percent of parity. Most wheat is grown under annual cropping, but in periods of low rainfall some wheat is grown on fallow. Another consideration is that farmers wish to maintain their wheat base acreage when acreage allotments are in effect.

Grain sorghum is the best paying alternative crop to winter wheat on the northwestern Kansas farm. Net returns from grain sorghum at the assumed price are higher than the returns from wheat at the nonsupported price but lower than those from wheat priced at 65 percent of parity

(table 4). However, farmers restrict the acreage of grain sorghum because it creates an erosion hazard, especially when it is grown on fallow land. Grain sorghum after wheat, as when in a wheat-grain sorghum-fallow rotation is less erosive.

On the Oklahoma study farm, grain sorghum pays better than other grain crops, although even at a feed price, it is a relatively poor alternative to winter wheat. Hence this study farm would grow little if any grain sorghum if the acreage of wheat were not restricted by programs. Both wheat and sorghum are grown without the use of fallow.

Grain sorghum is also the best paying alternative crop to winter wheat on the Colorado study farm, although returns per acre are somewhat below those from wheat priced at 65 percent of parity. Much of the sorghum is grown on abandoned winter wheat land; wheat abandonment, resulting mainly from low rainfall, averages about 29 percent of the seeded acreage. If not planted to sorghum, the abandoned wheatland can be summer fallowed and may be seeded back to winter wheat in the fall.

Spring-seeded barley is the chief crop alternative to wheat on the Montana study farms. Even so, returns from barley are relatively low, averaging less than wheat at a feed price (table 4). Consequently, little if any barley is grown profitably on the study farms except when programs control the acreage of wheat. Because of limited moisture, both wheat and barley are grown on fallow. On the northeastern Montana farm, both crops are spring-seeded. Fall-seeded wheat is grown on the north-central Montana farm. If the wheat winterkills, the land can be seeded to spring wheat or barley and a crop will be made the same year.

On the Washington study farm, winter wheat is the major crop, although spring wheat is seeded on fields where the winter wheat "kills out." Winter wheat is now grown chiefly in annual cropping, whereas 10 to 20 years ago it was usually grown on fallow. At that time, the problem with annual cropping was the slow rate of decomposition of straw from the preceding crop, which meant that the soil nitrogen was tied up and the wheat seedling starved. Nitrogen fertilizer is now applied to hasten decomposition and to feed the young seedlings. The shift to annual cropping and the use of fertilizer has greatly increased the capacity of this farm for wheat production. Some clean-cultivated fallow has been retained chiefly to control thistle and other weeds. The chief alternative crops are barley and dry peas, but at the assumed prices, neither crop would pay as well as wheat—even at a feed price (table 4). Pea production is held in check by market prices rather than availability of land. Hence barley is the chief alternative crop when wheat acreage is restricted by programs. Wheat, barley, and peas may be grown on fallow or in annual cropping.

On the Oregon study farm, winter wheat is the best-adapted and best-paying crop. Wheat is grown on fallow land. Annual cropping with the aid of nitrogen fertilization has been tried, but it has no advantage over the fallow system in the locale of the study farm. Spring wheat is seeded on abandoned fields of fall-seeded wheat. Barley, the next best paying crop, gives a return much below that of wheat even at a feed price. Traditionally, the barley has been a spring-seeded variety but in recent years, hardy fall-seeded varieties that yield more bushels than spring barley have been developed. Both wheat and barley are grown on fallow land.

ADJUSTMENTS TO PROGRAMS

In this section, the adjustments that the study farms would make to maximize profits under each program are discussed. The effects on acreage and production of wheat and other crops and on expenses and net returns are observed. Since the present situation on study farms is represented essentially by program A, this program is the basis for comparing other programs.

Program A – 1960 Wheat Acreage Allotments and Prices

Program A is similar to the 1960 wheat program except that no land-reserve program is assumed. The wheat acreage allotments would average about 65 to 70 percent of the acreage of wheat grown before allotments came into effect in 1954. Allotments would be in terms of acreage

Table 4. - Net return per acre, wheat and alternative crops, study farms 1/

Item	West-central Kansas		Northwestern Kansas 2/	Northwestern Oklahoma	Eastern Colorado 2/	Northeastern Montana	North-central Montana	Eastern Washington	Columbia Basin, Oreg.
	Cont. Wheat 2/	Wheat-Fallow 2/							
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Wheat at—									
90 percent of parity . .	16.18	14.14	12.79	18.90	10.17	11.29	16.38	79.50	23.70
85 percent of parity . .	15.06	12.47	11.80	17.39	9.50	10.34	15.13	73.74	22.35
75 percent of parity . .	12.91	10.66	10.10	13.95	8.23	8.64	12.73	62.72	18.12
65 percent of parity . .	10.03	8.31	7.95	10.52	6.90	6.81	10.11	51.71	14.47
Nonsupported price . .	6.96	5.62	5.58	6.23	5.17	4.75	7.60	36.38	9.13
Feed price	6.18	5.58	5.13	4.52	4.00	3.72	6.35	36.38	9.13
Other crops:									
Grain sorghum	8.09	----	6.84	3.75	6.00	----	----	----	----
Barley	----	----	----	----	----	3.06	5.37	31.47	6.89
Peas	----	----	----	----	----	----	----	20.06	----
Land reserve on— 3/									
Continuously cropped land	6.80	----	8.27	11.37	7.39	----	----	13.72	----
Crop-fallowed land. . .	----	5.68	5.52	----	5.39	4.85	5.55	8.97	9.50

1/ Return to cover depreciation management and use of capital. Return per acre of land used: Average for 2 acres where crop is grown on fallow; wheat on the Oregon, Montana, Colorado, and Northwestern Kansas study farms; barley on the Oregon and Montana study farms. Based on prices in table 3, and 1960 cost rates.

2/ Return for wheat includes net income from grain sorghum grown on abandoned wheatland.

3/ Based on average accepted bid rates, 1960 Conservation Reserve Program.

harvested. Wheat prices would be supported at a U.S. average price of $1.80 a bushel, about 75 percent of parity.

With program A, all study farms would maximize profits by growing their full acreage allotment of wheat. All would use the land diverted from wheat for production of feed grains and other crops. On the Kansas, Oklahoma, and Colorado study farms, the diversion would be mainly to grain sorghum, and on the Montana, Washington, and Oregon study farms, it would be mainly to barley. The west-central Kansas farm would have more summer fallow than it would have without the program. The additional fallow would be used in the wheat enterprise, with more of the wheat seeded on summer fallow and less in annual cropping. The Colorado farm would have less fallow acreage with program A, along with the reduced acreage of wheat. Ordinarily, grain sorghum, the alternative crop, would not be grown on summer fallow. Both Montana farms and the Oregon farm would maintain the prior acreage in fallow because barley, the alternative crop, is also grown on fallow land. The Washington farm would also maintain its prior acreage of fallow to control thistle and other weeds.

The acreage and production of crops, the expenses, and the net returns to management and invested capital with program A for each of the study farms are shown in table 5.

Program B – Smaller Wheat Acreage Allotments, Higher Prices

Wheat acreage allotments would be a fourth *smaller* than under program A, but the price of wheat is assumed to be supported at 85 percent of parity, instead of 75 percent as under program A. The increase in price, about 24 cents a bushel, would not compensate fully for the reduction in wheat production. Therefore, gross income from wheat would be reduced about 15 percent. For example, suppose that under program A, a farm has a wheat allotment of 100 acres and a gross income of $3,000. With program B, the allotment would be 75 acres, and the gross return from wheat $2,550. 1/ But more land would be available for producing other crops. For example, a farm with 100 acres of wheat base and a wheat allotment of 68 acres under program A, would have 32 acres available for other crops. Under program B, the wheat allotment would be 51 acres, which would leave 49 acres for other crops.

With program B, operators of all study farms would seed their full though reduced allotted acreage of wheat. All of the land released from wheat would be diverted to production of feed grains, except on the western Kansas study farm. This farmer would divert some of the released land to summer fallow for use in the wheat enterprise. The acreage of feed grain (sorghum) would increase 20 percent. The increase in acreage of feed grains on the study farms in Oklahoma, Montana, and Oregon would be roughly 50 percent. But on the northwestern Kansas and Colorado study farms, the feed grain acreage would nearly double because for each acre of wheat removed from a wheat-fallow system, 2 acreas of sorghum could be grown. Operators of the Montana and Oregon farms would shift from wheat-fallow to barley-fallow. The operator of the Oklahoma farm would shift from annual wheat to annual grain sorghum.

Total production of all grain (wheat and feed grains) would remain essentially unchanged on six study farms. But it would increase about 11 percent on the northwestern Kansas farm and about 16 percent on the Colorado farm, because of the shift from wheat-fallow to annual cropped sorghum.

Although gross income from wheat would be lower with program B, the difference would be approximately compensated for by the income from the crops grown on land released from wheat production (table 6). Farm expenses would change hardly at all because the costs of growing feed grains would be similar to those of growing wheat.

With program B, net returns to management and invested capital on the four study farms in Montana, Washington, and Oregon would be within 2 percent of the returns with program A. But net returns on the four study farms in Kansas, Oklahoma, and Colorado would be increased by 5 to 9 percent with program B. Program B seems to favor slightly the study farms on which the alternative crop, for instance grain sorghum, is grown annually in contrast to farms on which the alternative crop, such as barley, is grown on fallow.

Although program B would affect the study farms differently, the effect would be somewhat

1/ Computed: 75 acres @ $\frac{85\%}{75\%}$ X $30 + $2,550

Table 5. - Land use, production, and income on study farms with program A

Budget item	Unit	Kansas		North-eastern Oklahoma	Eastern Colorado	Montana		Eastern Washington	Columbia Basin, Oreg.
		Central	North-western			North-eastern	North-central		
Land use:									
Wheat on fallow	Acre	110	270	---	550	405	405	---	520
Wheat, continuous cropping	do.	170	---	473	---	---	---	166	---
Grain sorghum	do.	138	162	262	364	---	---	---	---
Barley	do.	---	---	---	---	173	173	163	280
Summer fallow	do.	122	338	---	886	578	578	87	800
Peas	do.	---	---	---	---	---	---	104	---
Production: 1/									
Wheat	Bushel	4,444	5,510	6,786	8,204	5,954	8,465	8,238	16,120
Grain sorghum	do.	2,932	2,890	3,925	4,365	---	---	---	---
Barley	do.	---	---	---	---	3,399	4,817	7,792	10,456
All grain	Ton	215	246	313	368	260	370	434	735
Peas	Cwt.	---	---	---	---	---	---	1,210	---
Income:									
Wheat	Dollar	8,088	9,863	12,079	14,521	10,241	13,629	14,417	28,855
Grain sorghum	do.	2,990	2,890	3,728	3,754	---	---	---	---
Barley	do.	---	---	---	---	2,447	3,324	6,389	9,097
Peas	do.	---	---	---	---	---	---	4,356	---
Total	do.	11,078	12,753	15,807	18,275	12,688	16,953	25,162	37,952
Expenses 2/	do.	6,403	6,998	10,059	7,762	6,666	7,194	12,987	20,140
Net return 3/	do.	4,675	5,755	5,748	10,513	6,022	9,756	12,175	17,812

1/ Excludes seed.
2/ Includes all expenses except a charge for use of capital. Includes a charge for all labor at hired wage rates.
3/ To management and capital.

Table 6. - Changes on study farms with program B

(25 percent smaller wheat acreage allotments, wheat price at 85 percent of parity)

Study farm	Change in acreage of—			Change in production, all grain	Change in gross income from—			Change in net returns 1/
	Wheat	Feed grain	Fallow		Wheat	Feed grain	All sources	
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
West-central Kansas. . .	-25	20	35	0	-6	23	2	7
Northwestern Kansas . .	-25	95	-25	11	-17	83	6	5
Northwestern Oklahoma.	-25	45	2/	1	-12	45	1	6
Eastern Colorado	-25	99	-25	16	-15	99	8	9
Northeastern Montana. .	-25	58	0	1	-15	58	-1	-2
North-central Montana .	-25	58	0	1	-14	59	0	0
Eastern Washington . . .	-25	25	0	-1	-16	32	-1	-2
Columbia Basin, Oreg. .	-25	46	0	0	-14	46	1	2

1/ Return to management and capital.
2/ No fallow used on this farm.

more uniform than those of the other programs considered.

Program C – Larger Wheat Acreage Allotments, Lower Prices

Wheat acreage allotments under program C are assumed to be a fifth *larger* than under program A, but the price of wheat would be supported at 65 percent of parity instead of 75 percent as in program A.

Even with the lower price, wheat would be a better paying crop on the study farms than feed grain at the assumed prices (table 4). The advantage of wheat would be substantial on the Montana, Washington, and Oregon farms where barley is the alternative grain crop. Wheat would have less advantage over grain sorghum on the Kansas and Colorado farms.

Because of the income advantage operators of the eight study farms would seed their full, expanded wheat acreage allotments. They would do this by taking land from feed grains. The operator of the west-central Kansas farm would also take some land out of summer fallow and would grow more of his wheat in annual cropping.

The larger acreage in wheat with program C would compensate for the decrease in price of the wheat—about 24 cents a bushel—so that gross income from the wheat enterprise with program C would be about 4 percent higher than with program A. For example, a farm with 100 acres of wheat allotment and a gross income of $3,000 from wheat with program A would have an allotment of 120 acres and a gross income of $3,120 from wheat with program C. 2/ Gross income from wheat would be *reduced* 5 and 7 percent, respectively, on the west-central and northwestern Kansas farms (table 7). But income

2/ Computed: 120 acres @ $\frac{65\%}{75\%}$ X $30 + $3,120

from other crops would not decrease as much on these farms as on other study farms.

With more land in wheat under program C, less land would be available for producing other crops. The acreages available for other crops on study farms would be decreased by roughly half. For example, on a farm with 100 acres of wheat base and a wheat allotment of 68 acres under program A, 32 acres would be left for other crops. Under program C, the wheat allotment would be increased to 82 acres, so anly 18 acres of the base acreage would remain for other crops. Allotments of study farms would deviate somewhat from this proportion. Associated with the reduction in available land would be a nearly proportionate reduction in gross income from other crops, that is, feed grains (table 7). This loss in income would be greatest, percentagewise, on the Oklahoma, Colorado, Montana, and Oregon farms.

Gross farm income—from all crops—under program C would be reduced by 4 to 10 percent on the study farms. The reduction would be slightly greater on the Kansas, Oklahoma, and Colorado farms than on those in Montana, Washington, and Oregon.

Under program C, net returns to management and invested capital would be reduced on all study farms (table 7). The reduction would be greatest on the Oklahoma, Kansas, and Colorado farms—those having grain sorghum as the alternative grain crop. The reduction would range from 8 to 14 percent on the farms in Montana, Washington, and Oregon—those having barley as the alternative grain crop.

Table 7. - Changes on study farms with program C

(20 percent larger wheat acreage allotments, wheat price at 65 percent of parity)

Study farm	Change in acreage of–			Change in production, all grain	Change in gross income from–			Change in net returns 1/
	Wheat	Feed grain	Fallow		Wheat	Feed grain	All sources	
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
West-central Kansas. . .	20	-16	-28	0	-5	-18	-8	-22
Northeastern Kansas. . .	20	-10	-11	1	-7	-14	-9	-22
Northwestern Oklahoma.	20	-36	2/	-3	2	-42	-8	-25
Eastern Colorado.	20	-63	13	-8	4	-63	-10	-15
Northeastern Montana. .	20	-47	0	-1	3	-47	-7	-13
North-central Montana .	20	-47	0	-1	1	-47	-8	-14
Eastern Washington . . .	20	-20	0	1	5	-24	-4	-8
Columbia Basin, Oreg.	20	-37	0	1	4	-37	-6	-13

1/ Return to management and capital.
2/ No fallow used on this farm.

With program C, the price of the wheat would need to be supported at about 70 instead of 84 percent of parity, to achieve the same net return to management and invested capital as with program A.

Production of all grain measured in tons would not differ greatly between programs C and A, except on the Colorado farm, where it would drop by 8 percent under program C.

Program D – Marketing Allotments on Food and Export Wheat, Stratified Prices

Under program D, each farm would have a marketing allotment in bushels equal to two-thirds of the normal yield on its 1960 wheat base acreage. This quantity of wheat is assumed to be supported at a U. S. average price of $1.56 a bushel, or about 65 percent of parity. Other wheat could be produced and sold freely at a feed-equivalent price. Each farm would have a food wheat quota in bushels equal to five-twelfths of the normal yield on its 1960 wheat base acreage. It is further assumed that a payment of 80 cents a bushel of the food quota could be earned by contracting 20 percent of the wheat base acreage in a land reserve. Land in the reserve would earn annual payments equal to the 1960 rates of the Conservation Reserve Program. If wheat is usually grown on fallow, an equal acreage of fallow land would be put into the reserve at a reduced non-diversion rate.

The eight study farms would grow their full marketing allotments (bushels) of wheat as computed in table 8. With a support price of 65 percent of parity, wheat would pay better than the next most profitable crop—feed grains—on each study farm (table 4).

Each of the study farms would also place 20 percent of its wheat base acreage in the land reserve, as would be required to earn the payment of 80 cents a bushel on food quota wheat. This payment, together with the rental payment, would represent a higher return on the reserve acreage than any other available use of the

Table 8. - Marketing allotments and food wheat quotas with program D, study farms

Study farm	Wheat base acreage 1/	Production on base 2/	Marketing allotment 3/	Food wheat quota 4/
	Acres	Bushels	Bushels	Bushels
West-central Kansas.	440	6,380	4,249	2,654
Northwestern Kansas	417	6,338	4,226	2,645
Northwestern Oklahoma.	718	10,275	6,851	4,486
Eastern Colorado.	803	12,306	8,203	5,015
Northeastern Montana.	578	9,090	6,060	3,784
North-central Montana	578	12,696	8,465	5,278
Eastern Washington	255	12,495	8,330	5,194
Columbia Basin, Oreg.	800	25,584	17,056	10,656

1/ As defined by ASC program.
2/ With normal yields.
3/ Computed as two-thirds of the production on the base.
4/ Computed as five-twelfths of the production on the base.

land. Suppose a farm has a wheat base of 100 acres, with a normal wheat yield of 18 bushels, and the land-reserve payment is $10 an acre, at the diversion rate. The food wheat quota would be 750 bushels (100 X $\frac{5}{12}$ X 18), and the payment would be $600 (750 X 80 cents). The 20 acres in the land reserve would earn a rental payment of $200. These two payments together would average $40 for each acre in the reserve. In a wheat-fallow area, another 20 acres would be placed in the reserve at the *nondiversion* rate and would earn a rental payment of $100. The total payment of $900 would average $22.50 an acre for the 40 acres in the land reserve. Returns computed in this way for each study farm are higher than the returns from other available uses of the reserve land. Readers are reminded that the food quota payment is assumed to be independent of the marketing allotment and can be earned only by participation in the land reserve.

Growing the marketing-allotment wheat and meeting the land-reserve requirement for the food quota payment would account for about 90 percent of the wheat base acreage and the associated fallow on the study farms. This would leave only about 10 percent for such other uses as growing feed wheat and other feed grains. This would compare with about 30 to 35 percent of the acreage available for nonwheat uses under program A.

The Oregon, Washington, Montana, and Oklahoma farms would use the remaining 10 percent of their wheat base acreage to grow feed wheat, because it would pay better than barley or grain sorghum (table 4). Also, with wheat grown on the remaining land, ample supplies of wheat would be more nearly assured to fill marketing quotas in periods of below-average yields. These farms would grow no feed grains with program D (table 9). But both Kansas farms would grow grain sorghum in preference to feed wheat. The Colorado study farm would seed all its land to allotment wheat because the average rate of abandonment is so high. The Colorado farm would grow grain sorghum on part of its wheat seedings that fail to make a crop. Except for the Oklahoma farm, all study farms would have less land in fallow with program D, chiefly because of the land-reserve requirement. The Oklahoma study farm would not have this requirement because it would grow wheat cropped annually. The west-central Kansas farm would reduce its fallow acreage even more because it would grow more of its wheat in annual cropping. The Washington study farm would have less need for clean cultivated fallow to control weeds. With some acreage in the reserve, less land would be farmed.

Production of all grain (wheat and feed grains) in tons would be about 20 to 30 percent smaller except on the Washington study farm, where it would be about 4 percent smaller (table 9).

Gross cash returns on study farms would be about the same as with program A on the Kansas farms and from 7 to 14 percent higher on the other farms (table 9). Net returns would be improved even more because farm expenses would be lower with land in the reserve. Net returns to management and invested capital would be slightly higher than with program A on the northwestern Kansas farm, 15 percent higher on the west-central Kansas farm, and 20 to 39 percent higher on the other study farms. With program D, income effects on the representative wheat farms would vary widely from area to area.

Program E – Marketing Allotments on Food Wheat, Stratified Prices

Under this assumed program, each farm would have a marketing allotment in bushels equal to five-twelfths of the normal yield on its 1960 wheat base acreage. This quantity of wheat is supported at a U. S. average price of $2.16 a bushel, about 90 percent of parity. For purposes of the study, the marketing allotment was presumed to be the farm share of the wheat required for domestic food use—the food wheat quota in program D. Other wheat could be produced and sold at the nonsupported price which, for purposes of the study, was assumed to be $1.25 a bushel, U. S. average. This other wheat could be exported, used industrially, or used for feed. Other crops, such as feed grains, could be produced on any remaining land, for sale at the assumed prices (table 3). There would be no land-reserve program.

In adjusting to program E, each of the study farms would produce the marketing allotment (bushels) of wheat. The allotment could be produced on about 44 percent of the wheat base acreage, leaving about 56 percent for production of other wheat, feed grains, or other crops. The

Table 9. - Changes on study farms with program D

Study farm	Change in acreage of–			Change in production, all grain	Change in gross income from—			Change in net returns 1/
	Wheat	Feed grain	Fallow		Wheat	Feed grain	All sources	
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
West-central Kansas. . .	4	-64	-44	-28	9	-67	1	15
Northwestern Kansas . .	-23	-15	-23	-21	-12	-15	-2	3
Northwestern Oklahoma.	25	-100	2/	-21	28	-100	10	39
Eastern Colorado.	-3	-72	-5	-25	13	-72	7	20
Northeastern Montana. .	14	-100	-20	-22	24	-100	11	38
North-central Montana .	14	-100	-20	-22	24	-100	9	25
Eastern Washington . . .	73	-100	-10	-4	62	-100	14	34
Columbia Basin, Oreg. .	23	-100	-20	-19	33	-100	12	37

1/ Returns to management and capital.
2/ No fallow used on this farm.

choice would depend largely upon the relative returns from these crops.

Returns from grain sorghum at the assumed price would be substantially higher than returns from wheat at the nonsupported price on both Kansas study farms. Consequently, these farms would grow as many acres of grain sorghum as they could grow safely in view of the erosion hazard. They would use any remaining land for production of wheat for sale at the nonsupported price. Although grain sorghum would pay slightly better than wheat at the nonsupported price on the Colorado farm, the difference would not be sufficient to overcome a reluctance to change enterprises. Thus, the Colorado farm would produce no grain sorghum with program E, except on part of its wheat seedings that fail. On the Oklahoma, Montana, Washington, and Oregon farms, wheat grown would be at the nonsupported price in preference to feed grains, because wheat would bring a higher return (table 4). Also, by growing wheat on the remaining land, ample supplies of wheat would be more nearly assured to fill marketing quotas in periods of below-average yields. On the Kansas and Colorado farms, acreages of summer fallow would be reduced, whereas in the Oregon, Washington and Montana farms, the same fallow acreages as in program A would be kept.

Total wheat production would increase with program E on all study farms except those in Kansas. On these farms, it would decrease. Wheat production would be nearly a sixth larger on the Colorado farm than with program A. It would be nearly a half larger on the Oklahoma, Montana, and Oregon farms, and nearly twice the wheat production under program A on the Washington farm.

The effect of program E on total grain production (tons) would also vary among the study

farms. Grain production would decrease 5 percent on the Oklahoma farm and 11 percent on the Colorado farm. In contrast, grain production would increase 8 percent on the northwestern Kansas farm, and 10 percent on the Washington farm. On the other study farms—west-central Kansas, Montana, and Oregon—grain production would change very little. These differences would result from the relative yields of wheat and other grains. If the yields were equal, a shift in acreages between the crops would not affect total grain production. If the yields were unequal, the size of the shift would also affect the degree of change.

Income from wheat would increase with program E on all except the Kansas farms. On these farms, it would decrease because less wheat would be produced. These farmers would grow as much grain sorghum as they could grow with program E. On the other study farms, income from wheat would increase with program E because these farmers would grow only wheat. Except for the Colorado farmer, who would plant grain sorghum on part of the wheat seedings that fall, they would grow no other grains. Total gross income would decrease slightly on two study farms, would be unchanged on one, would increase roughly 5 percent on four, and would increase by 12 percent on the Washington farm (table 10).

Program E would affect diversely the net returns to management and invested capital on each study farm, even if each made the most profitable adjustments available. Net return would be 4 to 19 percent higher than in program A on five of the farms but 2 to 11 percent lower on three farms. The Kansas and Colorado farms would have decreases. The Washington farm would have the largest increase in net returns followed by the Montana, Oregon, and Oklahoma farms in that order.

Table 10. - Changes on study farms with program E

Study farm	Change in acreage of—			Change in production, all grain	Change in gross income from—			Change in net returns 1/
	Wheat	Feed grain	Fallow		Wheat	Feed grain	All sources	
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
West-central Kansas . . .	7	19	-38	3	-3	9	0	-4
Northwestern Kansas . . .	-16	59	-16	8	-19	55	-2	-11
Northwestern Oklahoma .	55	-100	2/	-5	35	-100	4	4
Eastern Colorado	16	-64	16	-11	12	-64	-3	-2
Northeastern Montana . .	43	-100	0	-2	32	-100	6	14
North-central Montana . .	43	-100	0	-2	32	-100	6	11
Eastern Washington	98	-100	0	10	65	-100	12	19
Columbia Basin, Oreg. .	54	-100	0	-2	37	-100	4	9

1/ Return to management and capital.
2/ No fallow used on this farm.

Program F – No Production Controls, No Support Prices

Under program F, farmers would be free to produce wheat and other crops in any quantity and in any combination they wished, to the extent of their resources, for sale at nonsupported prices. U.S. average prices assumed per bushel are wheat $1.25, barley $0.90, and grain sorghum $1.01. Corresponding prices of these crops for study farms are shown in table 3. Program F would have no provision for a land reserve.

Wheat production at the assumed nonsupported price would return more income per acre than barley on the Oregon, Washington, and Montana farms (table 4). These farmers would grow a maximum acreage of wheat and no barley. Wheat would also pay better than grain sorghum on the Oklahoma farm. This farmer also would grow a maximum acreage of wheat. But on the two Kansas farms, wheat would not pay as well as grain sorghum. So operators of these farms would grow as much grain sorghum, with program F, as they could grow safely without serious hazard to erosion. Although grain sorghum would seem to pay a little better than wheat (at nonsupport prices) on the Colorado farm, this farmer prefers to grow wheat. As mentioned previously, he seeds winter wheat on all available land whenever crop prospects are favorable at the fall seeding date. He prefers not to take the chance that crop prospects may not be as good for grain sorghum the following spring. The Colorado study farmer grows grain sorghum as a catch crop when winter wheat seedings fail. Other changes on study farms are found in table 11.

The effects of program F on total grain production would vary on the different farms. Little or no change from program A would

Table 11. - Changes on study farms with program F

Study farm	Change in acreage of—			Change in production, all grain	Change in gross income from—			Change in net returns 1/
	Wheat	Feed grain	Fallow		Wheat	Feed grain	All sources	
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
West-central Kansas . . .	22	-18	-31	0	-22	-21	-21	-52
Northwestern Kansas . . .	-1	56	-26	9	-38	48	-18	-49
Northwestern Oklahoma .	55	-100	2/	-5	2	-100	-22	-66
Eastern Colorado	16	-64	16	-11	-20	-64	-29	-47
Northeastern Montana . .	43	-100	0	-2	-1	-100	-20	-42
North-central Montana . .	43	-100	0	-2	-1	-100	-20	-35
Eastern Washington	98	-100	0	10	32	-100	-7	-19
Columbia Basin, Oreg.	54	-100	0	-2	4	-100	-21	-44

1/ Return to management and capital.
2/ No fallow used on this farm.

occur on the west-central Kansas, Montana, and Oregon farms (table 11). Grain production would increase about 10 percent on the northwestern Kansas and Washington farms. It would decrease 5 percent on the Oklahoma farm and 11 percent on the Colorado farm. This means that a shift from other grains to wheat would increase total grain output if wheat yielded more pounds of grain per acre, and it would decrease the total output if wheat yielded less per acre than feed grain. Study farms differ in this respect.

Although wheat production would increase with program F, the gross income from wheat would actually fall on three of the study farms because of the lower price of wheat. Wheat income would be lower on the Kansas and Colorado farms. It would change very little on four study farms—those in Oklahoma, Montana, and Oregon. And it would increase substantially only on the Washington farm (table 11).

Gross farm income from all sources would be lower with program F on all study farms. On 6 of the farms, the reduction would be about 20 percent, but it would range from 7 percent on the Washington farm to 29 percent on the Colorado farm.

Net returns would decrease even more than gross returns with program F because expenses would be about the same as with program A. Program F would reduce the net return to management and invested capital by 19 percent on the Washington farm. The reduction would be 35 to 44 percent on the Montana and Oregon farms, about 50 percent on the Kansas and Colorado farms, and 66 percent on the Oklahoma farm.

Adjustments With A Land-Reserve Program for Cropland

A land reserve is a device for holding land out of production. It may or may not reduce the production of a specific crop. The recent Acreage-Reserve Program reduced the acreage of allotment crops because it applied solely to these crops. But a reserve program might be unrelated to any specific crop; it would merely reduce the total acreage of crops on the farm, as did the 1958-60 Conservation Reserve Program. This is the kind of reserve program discussed here.

Because the reserve land could come out of the acreage of any crop, it would tend to come first from the least profitable crops. If rental payments per acre were high enough and funds were available, the program would eventually reach the land now producing wheat. Before wheat production could be affected significantly in the study farm areas, the reserve would need to take the land out of less profitable crops such as oats, rye, barley, grain sorghum, and forages. The question is, What rate of annual rental payments per acre for reserve land would exceed the returns from these crops?

Land-reserve programs would mean a different kind of decision for the farmer than would either acreage-allotment or marketing-allotment programs. In the two latter programs the choice would be among crops within the present scale of farming operations. The land reserve would offer the choice of reduced scale of operations or of quitting farming. The farmer would need to consider what productive use he could make of his time (labor and management) and the capital that would be released from farming. A combination of part-time (or no) farming, land in the reserve, and part-time (or full) nonfarm employment might yield a larger net income than full-time farming. The nonfarm opportunities available to operators of the study farms were not considered. Such opportunities would depend upon both the availability of job opportunities and the training, aptitudes, and interests of the farmer. Instead, the net returns from farming with and without land in the reserve are compared and any nonfarm opportunities the farmer may have are disregarded.

For simplicity of analysis, the returns from crops and from the land reserve are compared using the data in table 4. The returns shown for the reserve are based on 1960 rental payment rates of the Conservation Reserve Program.3/ When cropland is diverted from either wheat or barley grown on fallow, 2 acres are involved—one earns the full diversion rate and the other the nondiversion, or half rate. When cropland is diverted from a continuous crop,

3/ We assume no limitation in payment per farm.

the one acre earns the full rate. The return from the land reserve under each circumstance is shown in table 4. The net return shown represents the rental payment minus taxes, insurance, and repairs to buildings and fences. Depreciation on equipment was not subtracted from returns of either the crops or the land reserve; for this analysis, depreciation is considered a business expense. To the extent that depreciation would be reduced, the reserve would be more attractive than the data indicate.

With these assumptions, the net return per acre from the land reserve compared with the net returns from crops on study farms is summarized as follows:

	Return per acre from the reserve higher than-
West-central Kansas	Wheat at feedprice.
Northwestern Kansas	Wheat at feed price and grain sorghum.
Northwestern Oklahoma	Wheat at 65 percent of parity andgrain sorghum.
Eastern Colorado	Wheat at the nonsupported price and grain sorghum.
Northeastern Montana	Wheat at the nonsupported price and barley.
North-central Montana	Wheat at feed price and barley.
Eastern Washington	None.
Oregon	Wheat at the nonsupported price and barley.

If a land reserve with the assumed rates of payment were added to the programs considered in the study, the reserve would bring a higher return per acre than the following crops and might compete with them:

	Land reserve could compete with-
All programs	Feed grains on all farms except west-central Kansas and eastern Washington.
Program C	Wheat on Oklahoma farm.
Program D	Feed wheat on all farms except north-central Montana and eastern Washington; wheat on Oklahoma farm.
Program E	Wheat at nonsupported price on Oklahoma, Colorado, northeastern Montana, and eastern Washington farms.
Program F	All wheat on northwestern Oklahoma, eastern Colorado, northeastern Montana and Oregon farms.

These comparisons suggest that in any land-reserve program, the rental rates should be carefully considered if the desired adjustments in land use are to be accomplished.

PATTERNS OF ADJUSTMENT ON STUDY FARMS

Study farms provide interesting similarities and contrasts in their patterns of adjustment to the array of programs considered in the study. Of particular interest are the production patterns of wheat and feed grains, and the patterns of expenses and returns. These patterns are shown in figures 1 to 4, based on data from budget summaries in tables 12 through 19. The charts depict relationships only for the specific programs and prices assumed in the study.

West Central Kansas Farm.- Total grain production in tons would be about the same with all programs except D, in which some land would be idled by the reserve. With the other programs, the variation in wheat production would be compensated for by an almost equal and opposite variation in production of feed grains. Expenses would be about the same except with programs D, in which they would be lower because some land would not be farmed.

Northwestern Kansas Farm.- Total grain production would be about 10 percent higher with programs B, E, and F, those under which more land would be in grain sorghum and less in wheat. With program B, the wheat acreage restriction would cause a shift to sorghum production. But with programs E and F, the shift to grain sorghum would be due to the lower returns from wheat at nonsupported or feed prices. Net returns would be highest with program B, lowest with program F, and about the same with other programs. This farm alone would have the highest net return with program B.

Northwestern Oklahoma Farm.- Total grain production would decrease with any shift of land from grain sorghum to wheat as with programs C, D, E, and F. Expenses are about the same except with program D, in which some land is in the reserve. Net returns would vary widely; they would be highest with program D, followed by programs B, E, A, C, and F.

Eastern Colorado Farm.- As on the Northwestern Kansas farm, total grain production would vary inversely with the acreage in wheat. Grain production would be largest with program B, under which wheat production would be most restricted. Grain production would be about 10 percent smaller with programs E and F, under which there would be a choice between wheat and grain sorghum, than with program A. Net returns would vary widely; they would be higher with programs D and B and lowest with program F.

Montana Farms.- The northeastern and north-central Montana farms would have similar patterns of production and income adjustments. Total grain production would be smaller with program D but would be about the same with the other programs. A substantial part of the grain would consist of barley with programs A, B, and C but entirely of wheat with programs E and F. Net returns would be enhanced with programs D and E and greatly depressed with program F.

Eastern Washington Farm.- Total grain production on this farm would be about the same with acreage-allotment programs A, B, and C, but it would be increased substantially with programs E and F, under which wheat acreage would not be restricted. With programs E and F, wheat would be the only kind of grain produced. As with the other farms, expenses would be about the same under all programs except D. The pattern of net returns would be similar to those on the Montana farms—highest with program D folowed by program E, then A and B, then C, and lowest with program F.

Columbia Basin, Oregon, Farm. - The pattern of total grain production on this farm would be about the same as the pattern on the Montana farms—about the same production with programs A, B, and C, and slightly lower with programs E and F, under which only wheat would be produced. The pattern of net returns would be similar also—highest with program D and lowest with program F.

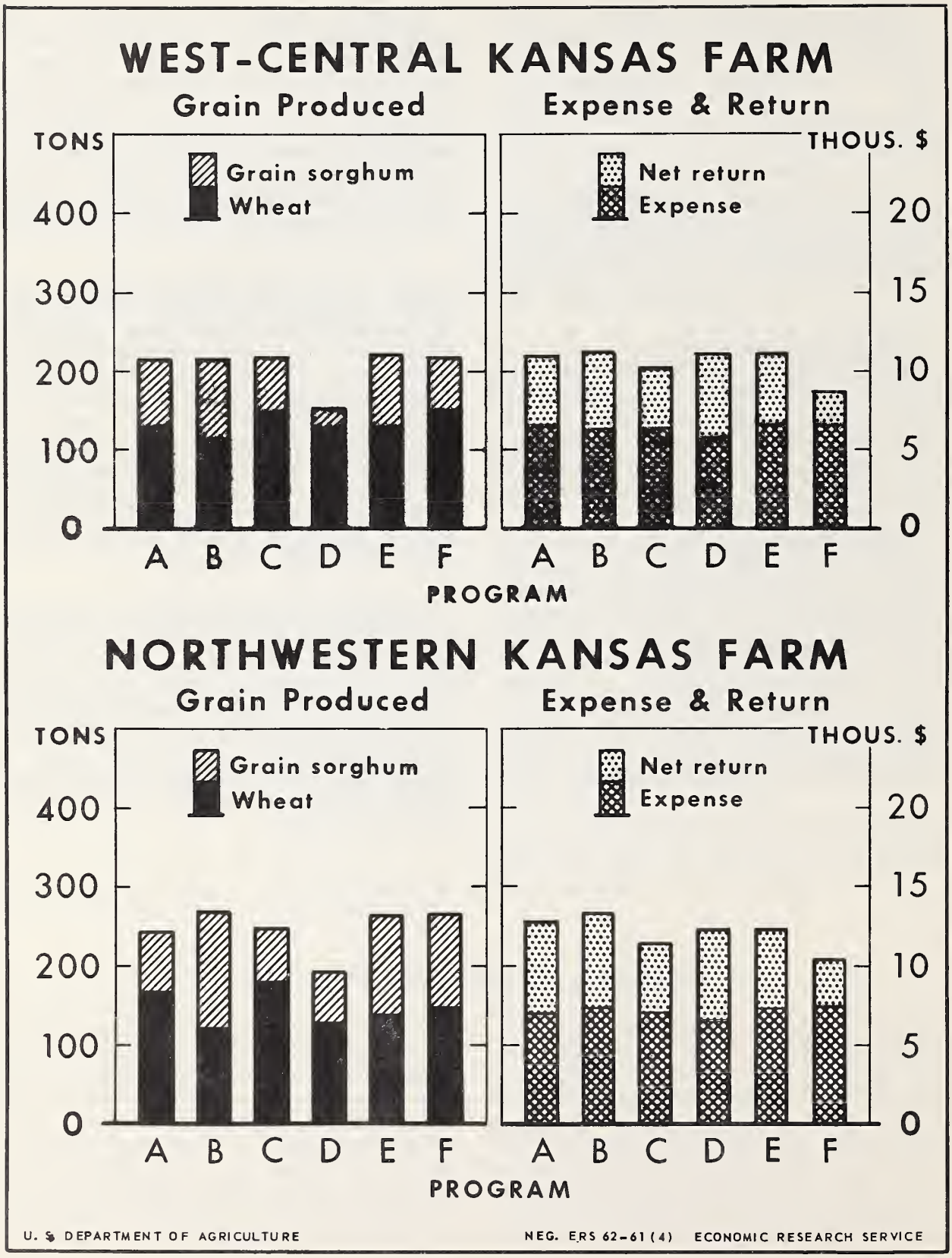
WEST-CENTRAL KANSAS FARM
Grain Produced
Expense & Return
TONS
THOUS. $
Grain sorghum
Wheat
Net return
Expense
400
300
200
100
0
20
15
10
5
0
A B C D E F
A B C D E F
PROGRAM
NORTHWESTERN KANSAS FARM
Grain Produced
Expense & Return
TONS
THOUS. $
Grain sorghum
Wheat
Net return
Expense
400
300
200
100
0
20
15
10
5
0
A B C D E F
A B C D E F
PROGRAM
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 62-61 (4) ECONOMIC RESEARCH SERVICE

Figure 1

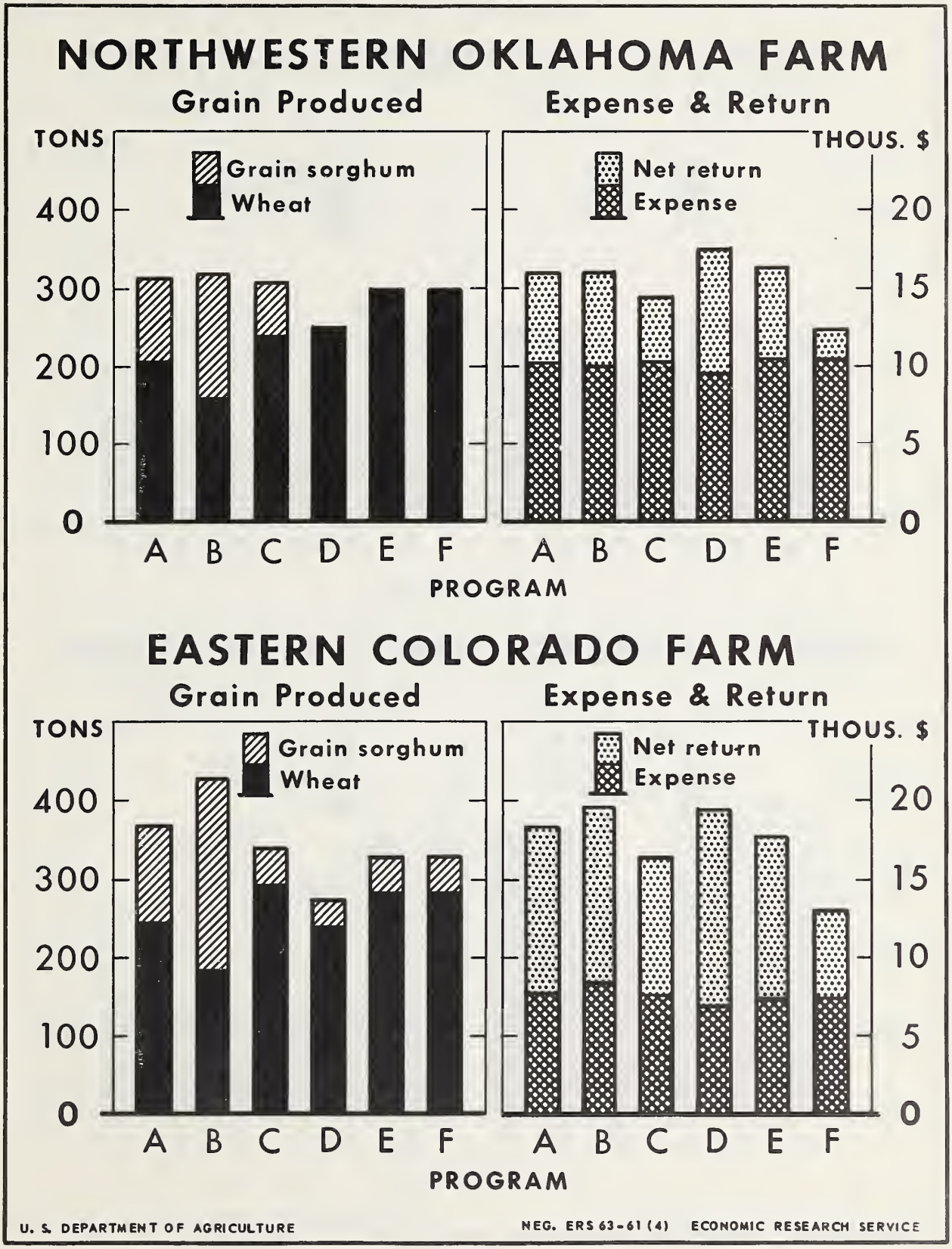
NORTHWESTERN OKLAHOMA FARM
Grain Produced
Expense & Return
TONS
THOUS. $
Grain sorghum
Wheat
Net return
Expense
400
300
200
100
0
20
15
10
5
0
A B C D E F
A B C D E F
PROGRAM
EASTERN COLORADO FARM
Grain Produced
Expense & Return
TONS
THOUS. $
Grain sorghum
Wheat
Net return
Expense
400
300
200
100
0
20
15
10
5
0
A B C D E F
A B C D E F
PROGRAM
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 63-61 (4) ECONOMIC RESEARCH SERVICE

Figure 2

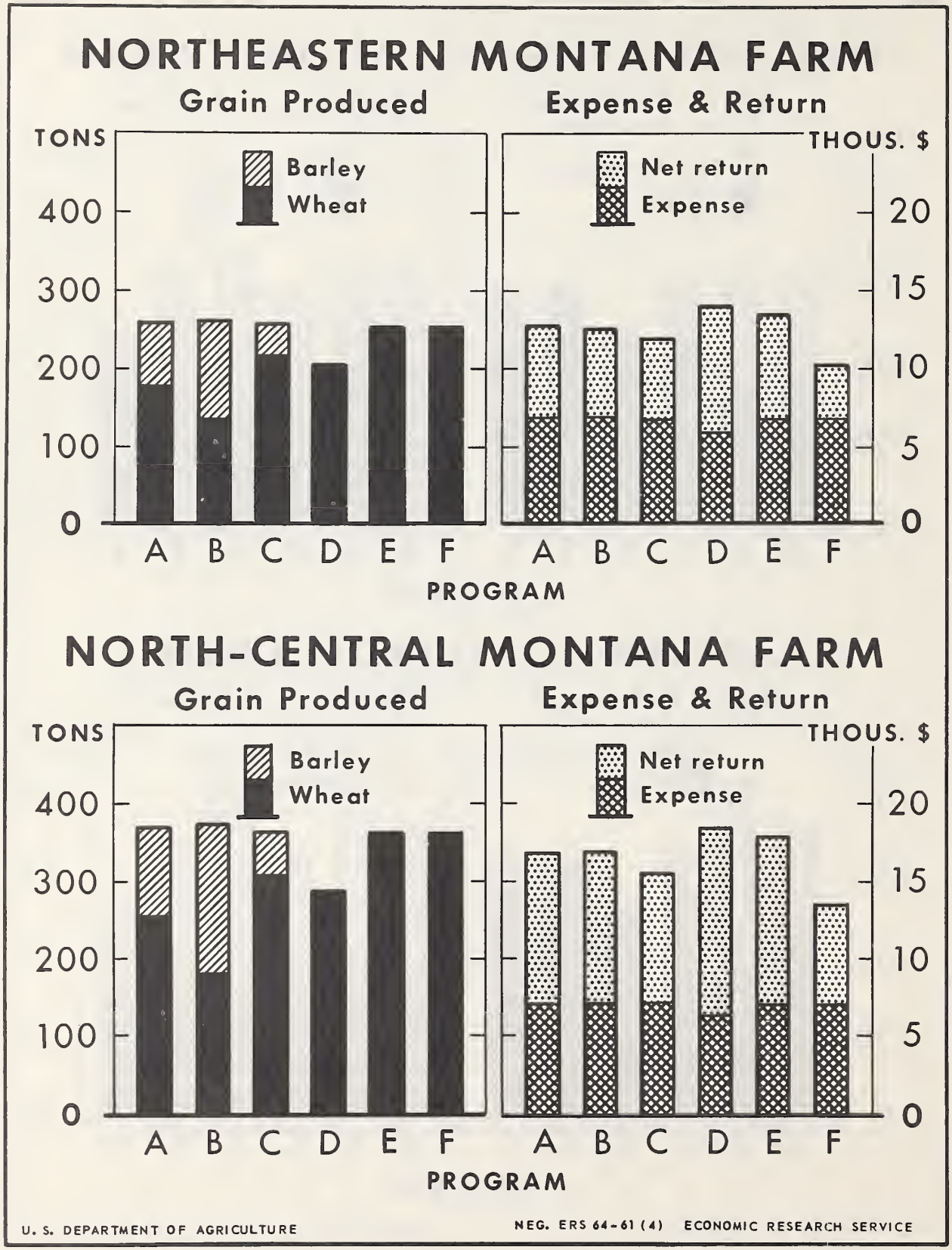
NORTHEASTERN MONTANA FARM
Grain Produced
Expense & Return
TONS
THOUS. $
Barley
Wheat
Net return
Expense
400
300
200
100
0
20
15
10
5
0
A B C D E F
A B C D E F
PROGRAM
NORTH-CENTRAL MONTANA FARM
Grain Produced
Expense & Return
TONS
THOUS. $
Barley
Wheat
Net return
Expense
400
300
200
100
0
20
15
10
5
0
A B C D E F
A B C D E F
PROGRAM
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 64-61 (4) ECONOMIC RESEARCH SERVICE

Figure 3

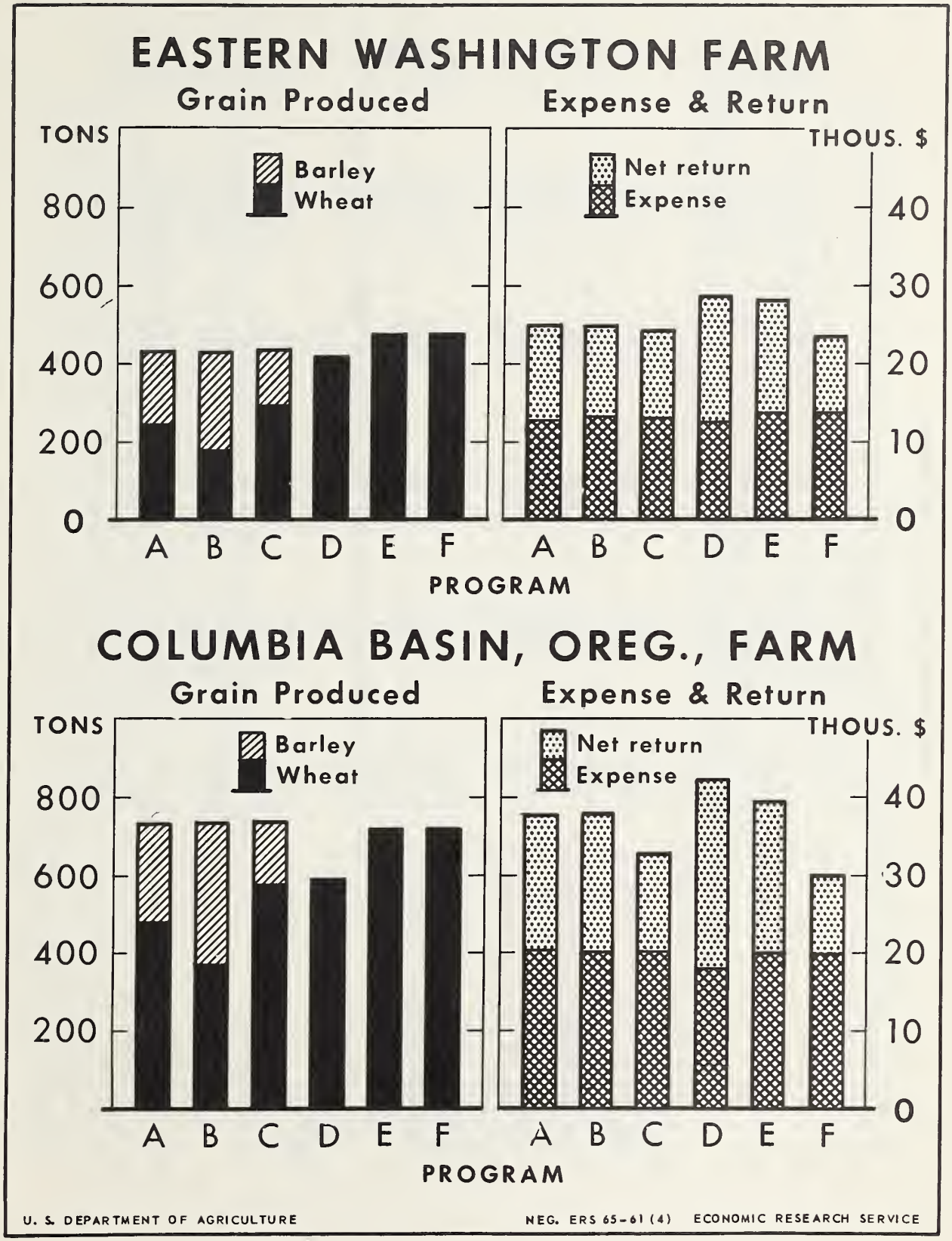
EASTERN WASHINGTON FARM
Grain Produced
Expense & Return
TONS
THOUS. $
Barley
Wheat
Net return
Expense
800
600
400
200
0
40
30
20
10
0
A B C D E F
A B C D E F
PROGRAM
COLUMBIA BASIN, OREG., FARM
Grain Produced
Expense & Return
TONS
THOUS. $
Barley
Wheat
Net return
Expense
800
600
400
200
40
30
20
10
0
A B C D E F
A B C D E F
PROGRAM
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 65-61 (4) ECONOMIC RESEARCH SERVICE

Figure 4

ADDITIONAL TABLES BY PROGRAMS

Table 12. - Land use, production, and income with each program, on the west-central Kansas farm (540 acres cropland, 440 acres wheat base)

Budget item	Unit	Acreage allotments			Marketing allotments on—		No controls or supports (program F)
		1960 allotments (program A)	Reduced allotments (program B)	Increased allotments (program C)	Food and export wheat (program D)	Food wheat only (program E)	
Land use:							
Wheat on fallow	Acre	110	149	79	61	68	76
Wheat, continuous cropping	do.	170	61	257	230	232	267
Grain sorghum	do.	138	165	116	49	164	113
Summer fallow	do.	122	165	88	68	76	84
Land reserve	do.	---	---	---	132	---	---
Production: 1/							
Wheat	Bushel	4,444	3,776	4,969	4,249	4,424	5,033
Grain sorghum	do.	2,932	3,598	2,397	960	3,208	2,325
Total grain	Ton	215	214	216	154	223	216
Income:							
Wheat	Dollar	8,088	7,628	7,702	8,815	7,830	6,342
Grain sorghum	do.	2,990	3,671	2,445	980	3,273	2,371
Land reserve	do.	---	---	---	1,375	---	---
Gross income	do	11,078	11,299	10,147	11,170	11,103	8,713
Expenses 2/	do.	6,403	6,297	6,483	5,804	6,620	6,487
Net return 3/	do.	4,675	5,002	3,664	5,366	4,483	2,226

1/ Excludes seed.
2/ Includes a charge for all labor at hired wage rates and all other expenses except a charge for use of capital.
3/ Return to management and capital.

Table 13. - Land use, production, and income with each program, on the northwestern Kansas farm (770 acres cropland, 417 acres wheat base)

Budget item	Unit	Acreage allotments			Marketing allotments on—		No controls or supports (program F)
		1960 allotments (program A)	Reduced allotments (program B)	Increased allotments (program C)	Food and export wheat (program D)	Food wheat only (program E)	
Land use:							
Wheat on fallow	Acre	270	202	240	207	228	200
Wheat, continuous cropping.	do.	---	---	84	---	---	67
Grain sorghum.	do.	162	316	146	138	257	253
Summer fallow.	do.	338	252	300	259	285	250
Land reserve.	do.	---	---	---	166	---	---
Production: 1/							
Wheat.	Bushel	5,510	4,108	5,982	4,226	4,645	4,941
Grain sorghum.	do.	2,890	5,294	2,482	2,450	4,485	4,305
Total grain	Ton	246	271	249	195	265	269
Income:							
Wheat.	Dollar	9,863	8,216	9,153	8,635	7,967	6,127
Grain sorghum.	do.	2,890	5,294	2,482	2,450	4,485	4,272
Land reserve.	do.	---	---	---	1,370	---	---
Gross income . . .	do.	12,753	13,510	11,635	12,455	12,452	10,399
Expenses 2/.	do.	6,998	7,440	7,147	6,455	7,304	7,445
Net return 3/	do.	5,755	6,070	4,488	6,000	5,148	2,954

1/ Excludes seed.
2/ Includes a charge for all labor at hired wage rates and all other expenses except a charge for use of capital.
3/ Return to management and capital.

Table 14. - Land use, production, and income with each program, on the northwestern Oklahoma farm (735 acres cropland, 718 acres wheat base)

Budget item	Unit	Acreage allotments			Marketing allotments on—		No controls or supports (program F)
		1960 allotments (program A)	Reduced allotments (program B)	Increased allotments (program C)	Food and export wheat (program D)	Food wheat only (program E)	
Land use:							
Wheat	Acre	473	355	568	592	735	735
Grain sorghum	do.	262	380	167	0	0	0
Land reserve	do.	---	---	---	143	---	---
Production: 1/							
Wheat	Bushel	6,786	5,247	8,017	8,286	9,944	9,944
Grain sorghum	do.	3,925	5,700	2,259	0	0	0
Total grain	Ton	313	317	304	249	298	298
Income:							
Wheat	Dollar	12,079	10,598	12,345	15,496	16,367	12,330
Grain sorghum	do.	3,728	5,415	2,146	0	---	---
Land reserve	do.	---	---	---	1,863	---	---
Gross income	do.	15,807	16,013	14,491	17,359	16,367	12,330
Expenses 2/	do.	10,059	9,921	10,154	9,389	10,346	10,346
Net return 3/	do.	5,748	6,092	4,337	7,970	6,021	1,984

1/ Excludes seed.
2/ Includes a charge for all labor at hired wage rates and all other expenses except a charge for use of capital.
3/ Return to management and capital.

Table 15. - Land use, production, and income with each program, on the eastern Colorado farm (1,800 acres cropland, 803 acres wheat base)

Budget item	Unit	Acreage allotments			Marketing allotments on—		No controls or supports (program F)
		1960 allotments (program A)	Reduced allotments (program B)	Increased allotments (program C)	Food and export wheat (program D)	Food wheat only (program E)	
Land use:							
Wheat	Acre	550	412	660	535	639	639
Grain sorghum	do.	364	724	135	102	130	130
Summer fallow	do.	886	664	1,005	841	1,031	1,031
Land reserve	do.	---	---	---	322	---	---
Production: 1/							
Wheat	Bushel	8,204	6,145	9,834	8,025	9,531	9,531
Grain sorghum 2/	do.	4,365	8,685	1,620	1,230	1,560	1,560
Total grain	Ton	368	428	340	275	330	330
Income:							
Wheat	Dollar	14,521	12,290	15,046	16,532	16,323	11,628
Grain sorghum	do.	3,754	7,469	1,393	1,058	1,342	1,342
Land reserve	do.	---	---	---	1,932	---	---
Gross income	do.	18,275	19,759	16,439	19,522	17,665	12,970
Expenses 3/	do.	7,762	8,328	7,536	6,851	7,394	7,394
Net return 4/	do	10,513	11,431	8,903	12,671	10,271	5,576

1/ Excludes seed.
2/ 252 and 640 acres respectively of sorghum in programs A and B is grown in continuous rotation. The remaining sorghum in all programs is grown on abandoned wheat land.
3/ Includes a charge for all labor at hired wage rates and all other expenses except a charge for use of capital.
4/ Return to management and capital.

Table 16. - Land use, production, and income with each program, on the northeastern Montana farm (1,156 acres cropland, 578 acres wheat base)

Budget item	Unit	Acreage allotments			Marketing allotments on—		No controls or supports (program F)
		1960 allotments (program A)	Reduced allotments (program B)	Increased allotments (program C)	Food and export wheat (program D)	Food wheat only (program E)	
Land use:							
Spring wheat	Acre	405	304	486	462	578	578
Barley	do.	173	274	92	---	---	---
Summer fallow	do.	578	578	578	462	578	578
Land reserve	do.	---	---	---	232	---	---
Production: 1/							
Wheat	Bushel	5,954	4,469	7,144	6,781	8,495	8,495
Barley	do.	3,399	5,384	1,808	---	---	---
Total grain	Ton	260	263	258	203	255	255
Income:							
Wheat	Dollar	10,241	8,715	10,502	12,693	13,477	10,109
Barley	do.	2,447	3,876	1,302	---	---	---
Land reserve	do.	---	---	---	1,333	---	---
Gross income	do.	12,688	12,591	11,804	14,026	13,477	10,109
Expenses 2/	do.	6,666	6,687	6,649	5,696	6,631	6,631
Net return 3/	do.	6,022	5,904	5,155	8,330	6,846	3,478

1/ Excludes seed.
2/ Includes a charge for all labor at hired wage rates and all other expenses except a charge for use of capital.
3/ Return to management and capital.

Table 17. - Land use, production, and income with each program, on the north-central Montana farm (1,156 acres cropland, 578 acres wheat base)

Budget item	Unit	Acreage allotments			Marketing allotments on—		No controls or supports (program F)
		1960 allotments (program A)	Reduced allotments (program B)	Increased allotments (program C)	Food and export wheat (program D)	Food wheat only (program E)	
Land use:							
Winter wheat	Acre	405	304	486	462	578	578
Barley	do.	173	274	92	---	---	---
Summer fallow	do.	578	578	578	462	578	578
Land reserve	do.	---	---	---	232	---	---
Production: 1/							
Wheat	Bushel	8,465	6,354	10,157	9,661	12,080	12,080
Barley	do.	4,817	7,640	2,564	---	---	---
Total grain	Ton	370	374	366	290	362	362
Income:							
Wheat	Dollar	13,629	11,691	13,814	16,931	17,963	13,530
Barley	do.	3,324	5,272	1,769	---	---	---
Land reserve	do.	---	---	---	1,552	---	---
Gross income	do.	16,953	16,963	15,583	18,483	17,963	13,530
Expenses 2/	do.	7,197	7,224	7,174	6,290	7,149	7,149
Net return 3/	do.	9,756	9,739	8,409	12,193	10,814	6,381

1/ Excludes seed.
2/ Includes a charge for all labor at hired wage rates and all other expenses except a charge for use of capital.
3/ Return to management and capital.

Table 18. - Land use, production, and income with each program, on the east Washington farm (520 acres cropland, 255 acres wheat base)

Budget item	Unit	Acreage allotments			Marketing allotments on—		No controls or supports (program F)
		1960 allotments (program A)	Reduced allotments (program B)	Increased allotments (program C)	Food and export wheat (program D)	Food wheat only (program E)	
Land use:							
Wheat	Acre	166	125	199	287	329	329
Barley	do.	163	204	130	---	---	---
Peas	do.	104	104	104	104	104	104
Summer fallow	do.	87	87	87	78	87	87
Land reserve	do.	---	---	---	51	---	---
Production: 1/							
Wheat	Bushel	8,238	6,098	9,916	13,900	15,890	15,890
Barley	do.	7,792	10,271	5,915	---	---	---
Peas	Cwt.	1,210	1,210	1,210	1,210	1,210	1,210
Total grain	Ton	434	429	439	417	477	477
Income:							
Wheat	Dollar	14,417	12,074	15,072	23,397	23,742	19,068
Barley	do.	6,389	8,422	4,850	---	---	---
Peas	do.	4,356	4,356	4,356	4,356	4,356	4,356
Land reserve	do.	---	---	---	969	---	---
Gross income	do.	25,162	24,852	24,278	28,722	28,098	23,424
Expenses 2/	do.	12,987	13,320	13,034	12,383	13,500	13,500
Net return 3/	do.	12,175	11,532	11,244	16,339	14,598	9,924

1/ Excludes seed.
2/ Includes a charge for all labor at hired wage rates and all other expenses except a charge for use of capital.
3/ Return to management and capital.

Table 19.- Land use, production, and income with each program, on the Columbia Basin, Oregon, farm (1,600 acres cropland, 800 acres wheat base)

Budget item	Unit	Acreage allotments			Marketing allotments on—		No controls or supports (program F)
		1960 allotments (program A)	Reduced allotments (program B)	Increased allotments (program C)	Food and export wheat (program D)	Food wheat only (program E)	
Land use:							
Wheat	Acre	520	390	624	640	800	800
Barley, winter	do.	158	231	99	---	---	---
Barley, spring	do.	122	179	77	---	---	---
Land reserve	do.	---	---	---	320	---	---
Summer fallow	do.	800	800	800	640	800	800
Production: 1/							
Wheat	Bushel	16,120	12,285	19,344	19,840	24,000	24,000
Barley	do.	10,456	15,308	6,571	---	---	---
Total grain	Ton	735	736	738	595	720	720
Income:							
Wheat	Dollar	28,855	24,939	29,983	38,442	39,590	30,000
Barley	do.	9,097	13,318	5,717	---	---	---
Land reserve	do.	---	---	---	3,960	---	---
Gross income	do.	37,952	38,257	35,700	42,402	39,590	30,000
Expenses 2/	do.	20,140	20,105	20,147	17,932	20,152	20,049
Net income 3/	do.	17,812	18,152	15,553	24,470	19,438	9,951

1/ Excludes seed.
2/ Includes a charge for all labor at hired wage rates and all other expenses except a charge for use of capital.
3/ Return to management and capital.